

REMARKS

By this amendment, claims 1-55 are submitted for consideration in view of the remarks following.

Applicants note with appreciation the allowance of claim 12 if rewritten in independent form including the limitation of the base and any intervening claim.

In the Office Action, the Examiner rejected claims 1-3, 7-9, 13-23, 36-39 and 41 under 35 USC 102(b) as anticipated by Noller (US Patent No. 5,155,767); rejected claims 24-35, 40 and 42-55 under 35 USC 102(e) as anticipated by Oguro (US Patent No. 5,907,655); rejected claims 4 and 5 under 35 USC 103(a) as unpatentable over Noller as applied to claim 1 and further in view of Ishimaru (US Patent No. 4,993,774); and rejected claims 6, 10 and 11 under 35 USC 103(a) as unpatentable over Noller as applied to claim 1 and further in view of Holcombe (US Patent No. 5,864,591).

Applicant wishes to thank the Examiner for the courtesies extended to the inventor and patent agent for applicant in the telephone interview of June 9, 2004, during which the cited reference to Noller was discussed with respect to, for example, the invention as claimed in claim 1. The cited reference to Oguro also was briefly mentioned. Applicant appreciates the Examiner taking the time from his busy schedule to discuss the features of the claimed invention with respect to the cited references.

With regards to the rejections based on the cited references, applicant respectfully submits that the cited references to Noller, Oguro, Ishimaru and/or Holcombe, taken alone or in any combination, fail to anticipate, or to make obvious, the present invention as disclosed in the specification and set forth in the claims 1-55 of this amendment.

To illustrate, referring to the rejection of claims 1-3, 7-9, 13-23, 36-39 and 41, Noller fails to disclose or remotely suggest the features of the present invention as set forth in, for example, the independent claims 1, 16, 20, 22, 36 and 39 and/or in the claims 2-3, 7-9, 13-15,

17-23, 37 and 38 variously dependent upon the claims 1, 16, 20 and 36. The present invention discloses a method and apparatus for providing selected manipulation of position separation between a leading sync or pseudo sync pulse, and a respective following AGC pulse, of a sync or pseudo sync/AGC pulse pair, to provide a reduction or defeat of copy protection or to provide copy protection via a dynamic disable/enable technique.

To the contrary, Noller fails to disclose or suggest a system or technique which includes or uses any configuration of sync/pseudo sync (negative going) pulses in combination with respective AGC (positive going) pulses. It follows therefore, that Noller cannot disclose applicant's claimed invention of selectively manipulating the positions and/or pulse widths of sync or pseudo sync and respective AGC pulses to selectively modify the position separation between the sync or pseudo sync and respective AGC pulses.

Noller discloses a system for adding copy protection to pre-recorded videotapes wherein the copy protection is provided by modifying the video signal by adding a new vertical sync pulse or signal about eight television lines prior to the original or normal vertical sync signal. As a result, Noller regenerates a video signal with two vertical sync signals, termed in Noller as a "new dual vertical sync structure." The extra vertical sync signal mimics the pulse duration of a normal vertical sync pulse. That is, the extra, second, vertical pulse supplied via an oscillator is varied in pulse width from 22 to 27 microseconds (Col. 7, lines 34-37).

The added second vertical sync signal causes a disruption in the recording process when a recorder (VCR) senses the added vertical sync along with the normal vertical sync. See Col. 4, lines 18 to 21 wherein Noller discloses that the dual vertical sync causes a VCR to record a defective control track, which causes speed variations of the played back copy of the original video signal thereby providing copy protection of a pre-recorded videotape.

Contrary to the concepts of the present invention as claimed, Noller's system is not based on the presence and relationship of sync or pseudo sync and respective AGC pulses. In fact, following the discussion of the prior art to Ryan in the Background of the Invention where Ryan's AGC copy protection system consists of pseudo sync and respective AGC pulses, Noller states that "No known prior art method or apparatus discloses or suggests the present invention," that is, the dual vertical sync structure of Noller.

Furthermore, Noller in Col. 1, line 53 to Col. 10, line 26 discloses only his dual vertical sync structure which is based on inserting the second vertical sync signal. See Fig. 1, block 17 and Fig. 9 with "second vertical sync." There is absolutely no disclosure anywhere in the Noller description, Col. 1 to Col. 10, of pseudo sync pulses and respective AGC pulses in any embodiment or any object of Noller. The acronym "AGC" discussed in Col. 2 of Noller refers to the automatic gain control (AGC) circuit which is used in many VCRs to insure a normal reference level for a video signal. To the contrary, applicant's acronym "AGC" refers to a positive going pulse which follows sync or pseudo sync pulses wherein the combination comprises a copy protection signal. Ergo, since Noller fails to even suggest the use of sync or pseudo sync/AGC pulses the conclusion that Noller discloses modifying the position separation between the sync or pseudo sync and respective AGC pulses to reduce the effects of copy protection, or to provide copy protection by dynamically varying the position separation, cannot be sustained.

Thus, Noller is not remotely concerned with creating a position separation between a sync or pseudo sync pulse and a respective AGC pulse of a sync/AGC pulse pair or a pseudo sync/AGC pulse pair.

More specifically, with regards to the rejection of claims 1-3, 7-9, 13-23, 36-39 and 41, it is respectfully submitted that the passages in Noller referred to by the Examiner fail to

disclose or suggest the features of the present invention as set forth in the claims 1-55. This fact is unavoidable considering the fact that the subject matter disclosed in Noller is totally unrelated to the subject matter of the present invention, as described and claimed. As discussed above, the present invention is concerned with providing a selectively variable position separation between sync or pseudo sync pulses and respective AGC pulses of each sync/pseudo sync/AGC pulse pair. To the contrary, as fully discussed above, Noller fails to contain a single sentence which remotely suggests creating a position separation between a sync or pseudo sync pulse and the respective AGC pulse of the pulse pair, since Noller fails to include any form of sync/AGC or pseudo sync/AGC pulses in his disclosed system.

Accordingly, as to claims 1, 2, 7, 9 and 13, the passage referenced by the Examiner, Col. 8, lines 21-63 includes a discussion of a conventional NTSC interlace scanning system in a first paragraph. A second paragraph includes a discussion of conventionally recording a control track with the video signal using vertical sync, whereupon playback of the recording, with a defective control track due to Noller's dual vertical sync structure, is unstable and thus copy protected.

Thus, the passage fails to disclose the use of pseudo sync and AGC pulses and the modification of the position separation between a sync or pseudo sync and respective AGC pulses, as variously recited in the claims 1, 2, 7, 9 and 13.

As to claims 3, 8, 14 and 16, the passage referenced by the Examiner, Col. 9, lines 25-53 discusses the use of the control track, the pulse width of the dual vertical sync structure and the need to reposition the picture in the frame store and the ramifications of repositioning.

Again, the passage fails to mention sync/AGC or pseudo sync/AGC pulses and position separation variation, and accordingly fails to suggest delaying or advancing leading

or trailing edges of any pulses or of specifying values of the delay or advancement. Noller fails to mention a blanking level, particularly with relation to a position separation and fails to suggest a modifying circuit which provides the pulse shifting and thus modified position separation, as variously recited in the claims 3, 8, 14 and 16.

As to claims 15, 22, 23, 37, 38 and 41, the passage referenced by the Examiner, Col. 3, lines 26-46, includes several objects of the invention which include reference to the new dual vertical sync structure and several of the effects caused by the structure such as rapid horizontal picture movement impairments, intermittent pitch changes on audio tracks, intermittent audio drop out, non-impaired machine-to-machine copying a pre-recorded videotape, etc.

As may be seen, the passage fails to mention phase shifting of any form of pulses, particularly not AGC pulses 180 degrees, does not suggest an amplifier/phase shifter circuit nor inverted/phase shifted sync/pseudo sync and respective AGC pulses nor a level shifter/attenuator means or inverted/phase shifted pulses which are level shifted/attenuated. The passage in Noller fails to suggest that the modified position separation provides the reduction in copy protection effects in a recorder or TV set to allow a recording since Noller only discloses a copy protection process, and Noller does not intend raised back porch AGC pulses that are modulated. The above features are variously recited in claims 15, 22, 23, 37, 38 and 41.

As to claims 17, 18 and 21, the passage in Col. 6, lines 16-51, provides a description of Fig. 1 which is a block diagram of a circuit for adding a second "vertical sync" to the video signal to form Noller's dual vertical sync structure via a dual vertical sync inserter. See Col. 6, lines 16-18. The description continues to explain how the audio signal is delayed so as to

maintain sound sync when the video with dual vertical sync and the audio signals are recombined for introduction to a recorder.

Note that there is not one mention in the entire passage of a sync or a pseudo sync pulse and/or a respective AGC pulse. Further, the delay circuit in Noller is for the audio signal, not the copy protected video signal, while the "switching circuit" in Noller combines the audio signal with the video signal with dual vertical syncs, which is not suggestive of applicant's switching circuit for inserting a delayed AGC pulse into the copy protected video signal to cause a reduction in, or defeat of, the copy protection effects, not to provide copy protection as in Noller.

Since Noller fails to suggest or intend sync or pseudo sync and respective AGC pulses, it is readily apparent that Noller cannot possibly suggest apparatus for modifying the position separation between sync or pseudo sync pulses and respective AGC pulses as recited in claims 17 and 18. Likewise, there is no suggestion in Noller of a circuit for reversing the order of one or more portions of a video signal, viz, the pseudo sync and respective AGC pulses as recited in claim 21.

As to claims 19 and 20, the passage in Noller, Col. 8, lines 11-29, referenced by the Examiner, briefly discusses the interlace of two field scans in the US color television standard, NTSC, and then continues with a portion of the description of the interlace process in the vertical blanking interval.

As may be seen, there is no mention of any color burst signal and obviously no mention of a color filter for inserting color burst into a video signal. Further, Noller fails to suggest a copy protection signal having pseudo sync and respective AGC pulses or a modifying circuit capable of reversing the order of the pulses to provide altered pulse pairs

which defeat or reduce the effect of copy protection signals. Noller fails to suggest applicant's pulse pairs or circuits for modifying the pulses.

As to claim 36, the passage in Col. 5, line 20 to Col. 6, line 6, is merely a brief description of Figs. 7-9, a discussion of the NTSC color television standard and a discussion of a vertical sync signal and its use as part of the video signal

Accordingly, the passage fails to remotely suggest the use of sync or pseudo sync and respective AGC pulses and therefore the separation therebetween in terms of leading or trailing edges of the pulses, or of specific values of position separation between the respective pulses, as recited in claim 36.

With regards now to the rejection of claims 24-35, 40 and 42-55 under 35 USC 102(e) as anticipated by Oguro (U.S. 5,907,655) it is respectfully submitted that Oguro, as Noller, fails to disclose or suggest the features of the invention as recited in claims 24-35, 40 and 42-55.

As to claim 24, Oguro also fails to remotely disclose or suggest generating any position separation between a sync or pseudo sync pulse and its respective AGC pulse. Contrary to the Examiner's conclusion, Col. 7, lines 31-39 does not remotely suggest providing a position separation between a sync or pseudo sync pulse and its respective AG pulse, and thus does not in any way suggest dynamically increasing the position separation to reduce or defeat the effects of the copy protection. Likewise, Col. 10, lines 20-28 does not suggest decreasing the position separation back to the small to zero position separation which re-establishes the copy protection. There is no mention of any type of position separation between selected pulses.

Col. 7, lines 31-39 discusses the effects of a color stripe system on a television set, and that the provision of the two flags AG and CS determines whether both the AGC system

and the color stripe system is used for copy protection, or whether only one of them is adopted.

Col. 10, lines 20-28 discusses the manner of storing a copy protection signal in selected horizontal lines of selected number of lines, wherein the number of lines can be increased or decreased.

Accordingly, it is readily apparent that the subject matter discussed in the two citations by the Examiner bears no resemblance to the features of the present invention described and claimed in claim 24, et seq. Oguro is a control system which determines the type of copy protection (e.g., AGC or color striping) which is applied to a video signal.

As to claim 25, Col. 7, lines 22-39 of Oguro is descriptive of Fig. 15 and is concerned with the VAUX control pack which contains AG and CS flags which, as discussed above, determine whether an AGC system and/or a color stripe system is adopted as copy protection. There is no mention whatsoever of small or increased position separation between a sync or pseudo sync pulse and its respective AGC pulse, as recited in claim 25.

As to claim 26, the Fig. 27 and accompanying description of Oguro generates line data for a line pack processing micro-computer which forms data as shown in Fig. 22 and routes the data to the format converter of Fig. 25. Neither the circuit nor the description remotely suggest a position separation between a sync or pseudo sync pulse and a respective AGC pulse, and accordingly cannot suggest dynamically varying the position separation by varying the advancement of the trailing edge of the sync or pseudo sync pulses with respect to the respective AGC pulse.

As to claim 27, Oguro also fails to suggest the alternative situation (of claim 26) in which the leading edge of the AGC pulse is dynamically varied to correspondingly vary the position separation between the sync or pseudo sync pulses and respective AGC pulses. The

delay circuit of Fig. 17 does not delay an AGC pulse leading edge, but delays instead the input composite video signal. See Col. 11, lines 43-46.

As to claims 28 and 29, as discussed above with respect to claims 26, 27, the Fig. 17 and its description concern subject matter which does not remotely relate to the position separation technique of the present invention nor to the fact that the position separation is dynamically varied by selected manipulation of the sync or pseudo sync pulses (for example leading edges). Oguro in Fig. 17 discloses a copy protection signal embodying pseudo sync and AGC pulses wherein the pulse levels are selectively changed to disable regular recording. See Col. 7, lines 52-55 and 59-62.

As to claim 30, the citation by the Examiner in Col. 10, lines 20-28, discuss that the copy protection signal is stored in selected positions in first and second fields and in selected horizontal lines, e.g., eight lines at the top and bottom of a field. This subject matter is not remotely related to the dynamic narrowing step of claim 30.

As to claim 31, a review of Fig. 29 and accompanying description of Oguro fails to reveal subject matter which generate modulated inverted pseudo sync pulses and AGC pulses that vary in width and position delay in response to the modulated inverted pseudo sync pulses. Fig. 29 likewise fails to suggest means for adding to the video signal a dynamic copy protection signal formed of the pseudo sync pulses and respective position modulated AGC pulses. The above features are set forth in the claim 31.

As to claims 32 and 33, the description in Oguro Col. 8, lines 1-50 (and Fig. 17) disclose a process of sampling the copy protection signal, digitizing the sampled signal and then packing the digital signal in the pack structure of the Oguro process. There is no mention of providing inverted pseudo sync pulses (the pseudo sync pulses in Fig. 17 are normal negative going pulses), no mention of AGC pulses of varying width and position and

no mention of means responsive to the inverted pseudo sync pulses and width and position varying AGC pulses to provide position modulated AGC pulses relative to pseudo sync pulses and thus a dynamically varying copy protected signal. The only variation in Oguro is the AGC pulse level (amplitude) changes as shown for example in Fig. 17 and disclosed in Col. 7, lines 52-55 and 59-62.

As to claims 34 and 35, Oguro fails to suggest, and has no intention of employing, the technique of the present invention of generating any position separation between the sync or pseudo sync pulses and the respective AGC pulses (of each pulse pair) and/or of dynamically position, pulse width and/or gap width modulating the particular pulses over time from maximum and back to minimum gap separation.

As to claim 40, Oguro fails to disclose or intend a modifying circuit capable of shifting the relative edges and/or positions of the negative going pulses with respect to respective positive going pulses so as to provide a modified position separation between the trailing edge of the negative going pulse and the leading edge of the positive going pulse. Oguro makes no mention of trailing or leading edges of any pulses anywhere in his specification. More importantly, as repeatedly argued above, Oguro fails to intend a process of modifying the position separation between negative going and respective positive going pulses.

The passage referred to by the Examiner, Col. 10, lines 20-28 states that the copy protection signal is stored in the same positions in first and second fields in specific horizontal lines... "so that a CM flag can be used effectively." The passage also mentions that "...eight lines of the copy protection signal are stored." The passage fails to even mention pulses or position separation of pulses.

As to claims 42, 44, 54 and 55, Oguro fails to disclose or suggest narrowing sync or pseudo sync or AGC pulses, dynamically amplitude modulating such pulses and/or modulating a selected number and arrangement of AGE pulses to enable and disable the copy protection signal. Col. 8, lines 1-50 discloses instead various frequencies which can be used as a sampling frequency for sampling a copy protection signal, digitizing the sampled signal and packing the digital signal in the pack structure. Ergo, this passage discloses subject matter which is not remotely related to the claimed invention in claims 42, 44, 54 and/or 55.

As to claims 45, 46, 47, 48, 50 and 55, the passage in Col. 10, lines 20-28 was discussed above with respect to claim 40 and is concerned with storing a copy protection signal in a same position in fields of video in selected lines and with the intended effective use of a CM flag. Ergo, Oguro fails to suggest narrowing any portion of pulses, shifting; or narrowing AGC pulses continuously or discretely, gap width modulating the position separation between sync or pseudo sync and respective AGC pulses, amplitude modulating position and/or pulse width modulated pulses, position modulating or delaying selected raised back porch pulses, or modulating a single AGC and/or pseudo sync pulse. Col. 10, lines 20-28 makes no mention of any form of pulses or modulation of pulses.

As to claims 49, 51 and 52, Col. 11, lines 47-65 provide a description of the circuit of Fig. 27 of Oguro which illustrates a line data signal generating circuit which stores the copy protection signal in memory, if it is detected, and thence to a line pack processing micro-computer. Again, this subject matter is not remotely related to the claimed invention in method claims 49, 51 and 52, i.e., the synthesizing of copy protection signals by dynamically modulating a selected combination of a position, gap width, pulse width or amplitude of one or more selected pulses.

Thus applicant respectfully submits that Noller and/or Oguro fail to suggest, or even intend, the combination of the invention as recited in the claims 1-3, 7-9, 13-23, 24-35 and 36-55 submitted herein. It has consistently been held by the courts that an anticipating reference under 35 USC 102 must disclose every material element of the claimed invention, that is, must identically describe applicant's invention, and must, together with the knowledge of one of ordinary skill in the art, enable the practice of the invention. See, for example, Kalman v. Kimberly-Clark, 713 F.2d 760, 218 USPQ 781 (Fed. Cir. 1983); Jamesbury Corp. v. Litton Industrial Products Inc., 756 F.2d at 1560, 225 USPQ 253, 256 (Fed. Cir. 1985); Northlake Marketing & Supply Inc. v. Glaverbel S.A., 45 USPQ2d 1141 (N.D.I.L. 1997); Database Excelleration Systems Inc. v. Imperial Technology Inc., 50 USPQ2d 1527 (N.D.I.L. 1999); General Electric Co. v. Nintendo Co., 50 USPQ2d 1910 (CAFC 1999); Ex parte Rozzi, 63 USPQ2d 1196 (BPAI 2002).

It is respectfully submitted that Noller or Oguro fail to identically describe applicant's invention as claimed, and further fail to enable one skilled in the art to practice the claimed invention from Noller or Oguro alone, as is required under 35 USC 102, without re-inventing Noller or Oguro by exertion of his own inventive skill, and/or without recourse to the teachings of this application, for the reasons fully discussed above.

With regards now to the rejection of claims 4 and 5 under 35 USC 103(a) as unpatentable over Noller and further in view of Ishimaru (U.S. 4,933,774), as to claims 4 and 5 Noller fails to suggest any modification of the small position separation between sync or pseudo sync pulses and respective AGC pulses. Ishimaru on the other hand fails to suggest providing an advancement of 1.0 to 2.5 microseconds of the sync/pseudo sync pulses relative to the leading edge of the respective AGC pulses, as contended by the Examiner. Ishimaru in Fig. 4, and Figs. 5b and 5c and accompanying descriptions discloses instead a technique for

controlling a field memory and accordingly is concerned with insuring the presence of vertical sync signals, not the manipulation of horizontal sync (or pseudo sync) pulses relative to respective AGC pulses and/or vice versa. Ergo, the waveforms of Figs. 5b, 5c are concerned with a vertical time period V, wherein the vertical sync pulse has a trailing edge delayed a time period T1 which is approximately equal to $7 \pm 2H$ (where H equals one line of 63.5 microseconds), that is, 127 ± 7 microseconds. See Col. 4, lines 42-45 (et. seq.), and Col. 4, line 64 to Col. 5, line 8. The horizontal sync pulse Sh is used only to increment the address accessed in the field memory each horizontal line. No advancement is made in the manner of claims 4 and 5. See Col. 4, lines 59-64. Obviously, Ishimaru fails to remotely suggest the features of claims 4 and/or 5.

It follows that there would be no motivation to combine Ishimaru and Noller to obtain the method of applicant. Ishimaru is concerned with vertical sync and the associated much larger time periods and the system of Noller is mainly concerned with adding a second vertical sync to provide copy protection. Neither of the cited references are concerned with, or suggest, the manipulation of position separation between a sync or pseudo sync pulse and its respective AGC pulse to correspondingly manipulate the effects of copy protection.

Finally, with regards to the rejection of claims 6, 10 and 11 under 35 USC 103 as unpatentable over Noller in view of Holcombe (U.S. 5,864,591), applicant fails to find in Holcombe any mention of sync or pseudo sync pulses in combination with respective AGC pulses. The delay circuit in Fig. 6 of Holcombe receives an input signal from an infrared photodiode via a bandpass filter and comparator. There is no mention of sync or pseudo sync pulses or respective AGC pulses defining a copy protection signal. Ergo, there is no mention in Holcombe of advancing the trailing edge of sync or pseudo sync pulses while delaying respective AGC pulses a selected time period. The delay in Fig. 6 delays the entire incoming

signal and makes no mention of advancing any sync or pseudo sync pulse and/or of delaying any related AGC pulse for specific time periods. Further, Holcombe fails to suggest or imply manipulating a position separation of any kind.

Since Holcombe is concerned with suppressing the effect of feedback from the output to the input of a receiver, and is not remotely concerned with copy protection processes and makes no mention of sync or pseudo sync and/or AGC pulses, there would be no motivation for modifying Noller by the teachings of Holcombe to derive the method and apparatus of the present invention. For example, the description in Col. 8, lines 23-34 is not remotely related to applicant's invention.

Accordingly, applicant respectfully submits that the cited references to Noller, Oguro, Ishimaru and/or Holcombe taken alone or in combination, fail to anticipate, or make obvious, the features of the present invention as described and claimed in claims 1-55 presented herewith and that such claims are in condition for allowance, which action is earnestly solicited.

If the Examiner finds differences which could be resolved by telephone interview, applicant can be reached by phone at (408) 562-8496.

If the Examiner persists in his final rejection, applicant respectfully requests entry of the amendment for purposes of appeal.

Respectfully submitted,

Date: 7/1/04

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